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ABSTRACT

To help develop a long range plan for the California Community Colleges (CCC), a "futures research" project was undertaken to gather information on internal and external college trends and subject that data to various analytical and consensus-building techniques. In the project, a literature review was conducted, external forecasts for the colleges were analyzed, and internal forecasts were prepared and revised. This information was then presented to the CCC Chancellor and important trends were identified and prioritized. Following full Task Force and Consultation Council meetings, emphasizing consensus for all points of substance, the New Basic Agenda was developed, summarizing policy directions and setting an agenda for future policy development. Trends identified in the project as most important to the colleges included the following: (1) changes in demography, including increases in the number of 18-24 year olds and the diversity of students; (2) technological advances related to interactive communications and computer use; (3) longer and shallower economic cycles, increased outsourcing, and globalization; (4) social changes, including the advent of a multicultural society and increased living alone; and (5) changes in public policy, including decreasing federal control and continued inadequate funding. The project also identified pedagogical and policy trends that will affect planning, including the shift from teaching- to learning-centered institutions and increasing collaboration, as opposed to competition. (BCY)

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TRENDS IMPORTANT TO COMMUNITY COLLEGES

Roundtable Discussion

Presented by:

Chuck McIntyre
Director of Research
Chancellor's Office
California Community Colleges

at:

American Association of Community Colleges
77th Annual Convention
"Visioning"

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Summary and Selected Figures

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TRENDS IMPORTANT TO COMMUNITY COLLEGES

by
Chuck McIntyre

INTRODUCTION

This White Paper describes a futures research project that was conducted to help develop a long range plan for the California Community College Board of Governors, *The New Basic Agenda: Policy Directions for Student Success*, adopted in March 1996. We begin by describing our research and planning methodology, after which California trends, their implications, and applications elsewhere are analyzed. The paper concludes with a summary of the most important trends and key lessons learned in the project. While undertaken for California, this work can be applied usefully to any college or system of colleges.

To provide context for this discussion, we note that the California Community College Board of Governors (BOG) is a 16-member statewide group, appointed by the State's Governor, which has broad leadership and regulatory responsibilities for 71 districts and 106 local community colleges, 46 centers and hundreds of outreach locations across California. Each of the 71 districts has a five- or seven-person, locally-elected board that oversees the management of that district.

Like many states, the responsibility for governing California community colleges is shared between state and local authorities. For instance, the state-level BOG adopts minimum qualifications for faculty hiring, but local boards (or their designees) hire faculty, CEOs, and other staff. College governance is shared also - between trustees, administration, faculty and students - at both local and state levels. Locally, college faculty senates are part of college and district decisionmaking, along with the district board and CEO. At the state level, policymaking is guided by a "consultation process" in which all constituents (trustees, administration, faculty and students) participate. While the BOG engages in statewide planning, each local district also plans for its own colleges and service area. The BOG provides regional

coordination of these local plans.

METHODOLOGY

Futures Research. This project relies on "futures research" techniques, commonly used by colleges and universities; see, for example, Morrison, Renfro, and Boucher (1984) and McIntyre (1991). In futures research, staff gather information from a wide variety of sources on trends both internal and external to the college, an effort often called an "environmental scan;" then they subject that information to rigorous analysis and consensus-building.

Data internal to the college may come from a management information system - if such exists - or from the several data bases that support college transactions for students, faculty, curriculum, and finance. This internal work may be carried out in a variety of guises, all of which are intended to evaluate the effectiveness of the college(s)' current policies and practices. Self-study and peer evaluation through accreditation is perhaps the most comprehensive technique, but most colleges also employ a process of program evaluations - some like Nursing for program accreditation. A bit more systematic evaluation is the institutuional audit suggested by Keller and Morrison (1995) and the review of institutitional effectiveness measures (AACC, 1995). Most of this work utilizes comparisons, benchmarks, trends, and standards that are particularly difficult for community colleges because of their students' diversity: in ages, cultures, and entering skills. These differences must be controlled - in a research sense - to estimate the "value added" to students by colleges; see for example McIntyre (1989). Moreover, an internal analysis, say of access, is incomplete if it ignores key information on the service area population of the college(s); i.e., external information. And, for planning, future trends in this external information must be developed in order that the analysis contributes to identifying desired changes in college policy and practice.

This *external information* is found in a variety of sources: newspapers, journals, books, periodicals, professional societies, public agencies, and private firms and foundations. Increasingly, this information is

secured electronically through "search engines" that operate with the Internet, CD ROMs, and related tools. Some colleges scan routinely for their planning. Once gathered, information and data from the scan are analyzed to identify trends and possible future events pertinent to the college.

Many analytical techniques are available. *Probability impact* is one that combines the questions: "How likely is the trend or event?" and "If it happens, what is its impact on the college?" *Cross impact* takes this one step further by showing how trends or events impact one-another as well as impact the college. An *impact network* can help describe this sometimes very complex interaction or it can enable planners to observe how such impacts are interrelated among the college's various functions. Methods sometimes referred to as *systems analysis* are involved. *Forecasting* is necessary, of course, to develop estimates of future values for the key variables such as student enrollment. College planners either build their own forecasting models, use others, or use a combination of both. *Simulation* modeling can be defined as the process of building "...an assumption or imitation of..." a college's operation within an assumed future environment. *Modeling* enables planners to simulate the probable consequences of different "what if?" questions about key decisions, within different probable future scenarios. *Scenario writing* involves the integration of information to develop stories about the future that are relevant to the college.

Probable future scenarios and preferred solutions to problems are then narrowed through one or more group consensus-building techniques. These techniques involve *focus groups, charrette, Delphi, triad, nominal group technique, Quest/Ed Quest, Focused Planning Effort*, and combinations of these. College planners typically compose groups whose members are either experts in the subject of the scenarios and/or are responsible to implement the solutions identified. The group techniques differ from one another largely in how they equalize input from each member, measure consensus, allot time, and intensify effort. When properly conducted, these techniques can produce useful consensus agendas about future college actions.

Planning Process. While using many of the above techniques, our project differs from typical futures

research because the BOG had already been planning: adopting a Basic Agenda each year for over a decade, some of the planning had occurred, and consensus-building techniques employed; see for example, Board of Governors (1995) and Chancellor's Office (1993, 1988). The BOG's 1995 request for a New Basic Agenda came because its prior 1992 Agenda was out-of-date following changes in California: an economic recession, sharply reduced public funding, temporary easing of population growth, and continued technological change.

Staff's response to the BOG request began with:

(a) review of the relevant literature,

(b) review and analysis of external (to the colleges) forecasts, and

(c) preparation and revision of internal (to the colleges) forecasts. (See Figure 1A.)

....insert Figure 1A about here....

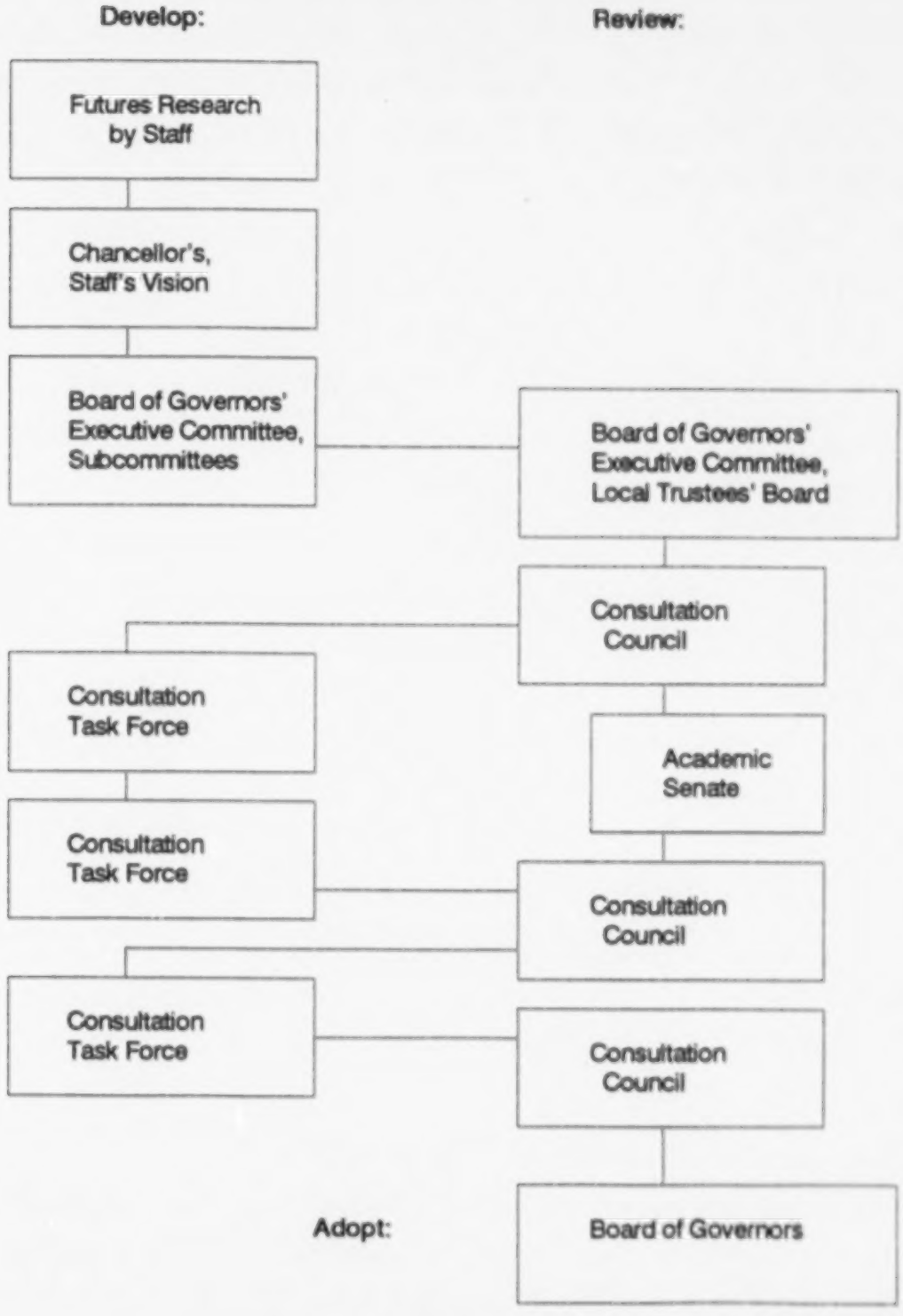
This material was then reviewed with the Chancellor and his vision for community colleges identified. From this, a draft Trends and Implications statement was prepared. This was extensively reviewed by the BOG Executive Committee and its Subcommittee on the *New Basic Agenda*, to enable staff to identify and prioritize important trends. This priority was then analyzed by a specially-appointed Task Force from the "consultation process," which agreed to organize the Agenda around:

- o *trends* for demographics, technology, economy, society, and public policy
  (1) analyzed for their implied problems and (2) aggregated into
- o four *challenges* confronting the community colleges:
  (1) to meet expanding needs and (2) to meet changing needs in
  (3) a high quality, and (4) better organized and more effective way;
- o these challenges are then addressed by *policy directions* that
  either exist (12 in number) or are subject to further debate (10 in number).

Next, a series of Task Force and full Consultation Council meetings was held to debate, refine, and rewrite

Figure 1A

PROCESS MODEL FOR TRENDS PROJECT
CALIFORNIA COMMUNITY COLLEGES



the policy directions. The decision rule on substance was consensus as declared by the appointed chair of each group. A final draft of the *New Basic Agenda* was returned to the full BOG for approval in March 1996, ten months after project inception.

Plan Content. The *New Basic Agenda* provides a concise statement of existing BOG policy directions and an agenda for future debate on policy directions that hold promise, but for which there is not yet consensus on their implementation. Plan effectiveness relies largely on BOG leadership and on participants' consensus about the important trends. Early consensus seems to have diminished the debate about certain implications. To illustrate, specific assumptions about (the length and depth of) California's economic recovery directly influence projections of student enrollment demand and of community college budgets, curriculum and services. A general consensus that California's economic recovery will continue for several years suggests that college growth, restructuring, and technology strategies need to now be considered for implementation. As another illustration, it is widely agreed that the increasing diversity of California's community college students, together with changes in telecommunications, will result in those students requiring more precollegiate preparation, but - at the same time - being more skilled in the use of various technologies: a seeming paradox that is significant implications for what and how community colleges should teach over time.

Initial research for this project is based on the categories of trend information which comprise a typical "environmental scan."

Demography: Most certain of the trends. Apart from uncertainty of policies about immigrants, most individuals colleges plan to teach over the next decade already reside in their areas.

Technology: Changing ever more rapidly as time goes by. Yet, basic developments that indicate what and how colleges should teach are broadly predictable.

Economy. Economic cycles are difficult to forecast, and few agents do so for more than one or two years into the future. The cycle is of key importance to the demand for and funding of colleges.

Society. Equally difficult to forecast and increasingly diverse are changes that will take place in family formation, values, and lifestyles. These factors impact how (well) individuals learn.

Public Policy. Most difficult to predict, particularly in states, like California, that have a strong initiative process and term-limits. Colleges are impacted by all kinds of policies, not just those about education.

The use of these particular categories is based our experience of planning for the Board of Governors. The categories do differ slightly from those used, say, in *On the Horizon*, an eminent scanning publication:

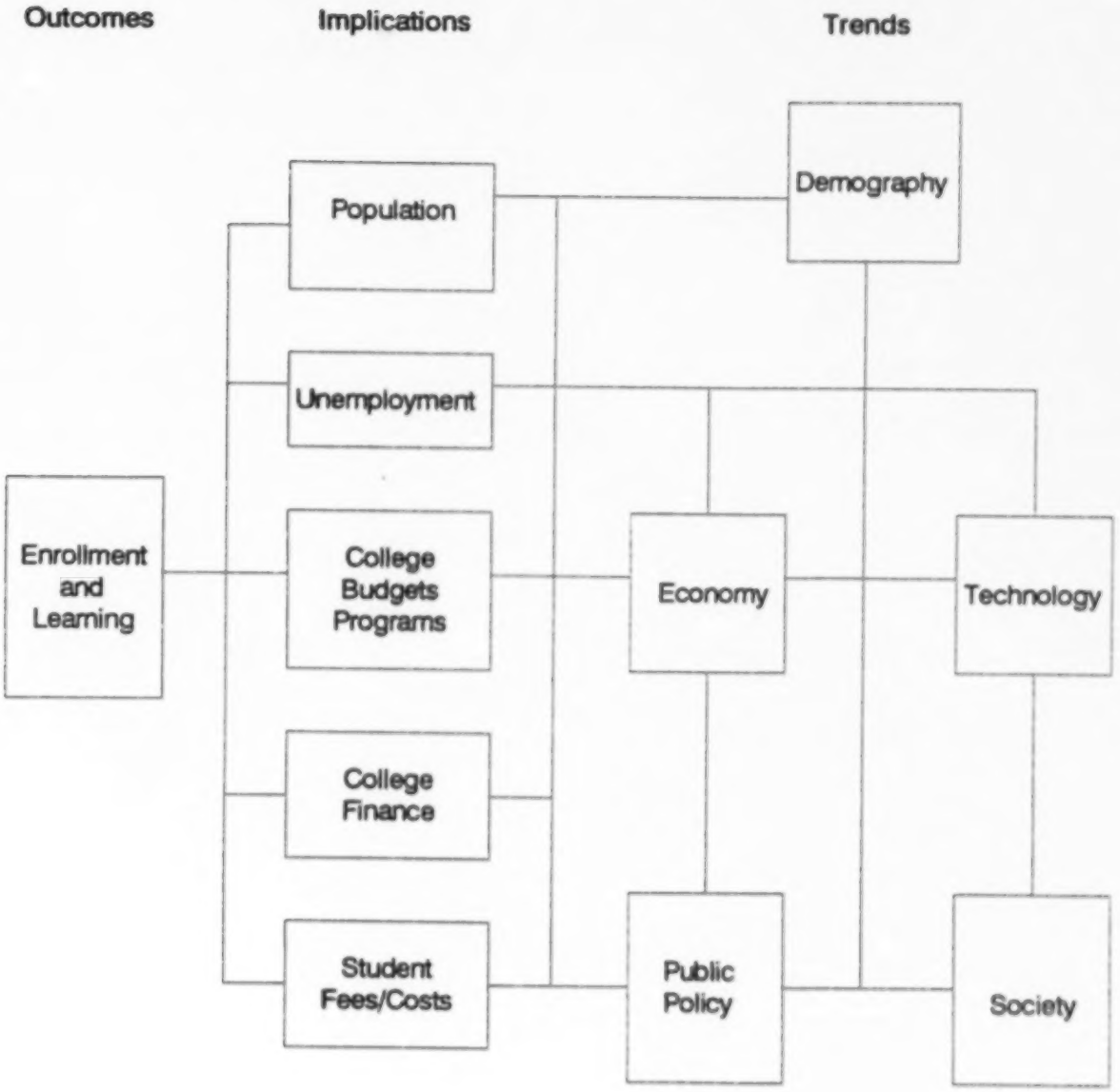
On the Horizon	*Board of Governors*
-	Demography
Social	Society
Technological	Technology
Economic	Economy
Environmental	-
Political	Public Policy

We have found that demography is crucial as a distinct category to our planning, that environmental concerns appear throughout, and that public policy spans more than just political considerations and also enables us to segue smoothly into policies specific to the colleges.

Forecasts. To identify future planning scenarios, staff prepared its own forecasts and used results from other models. A key feature of our work is a general model of the determinants for estimating future enrollment and learning (Figure 1B).

Figure 1B

CONTENT MODEL FOR TRENDS PROJECT
CALIFORNIA COMMUNITY COLLEGES



....insert Figure 1B about here....

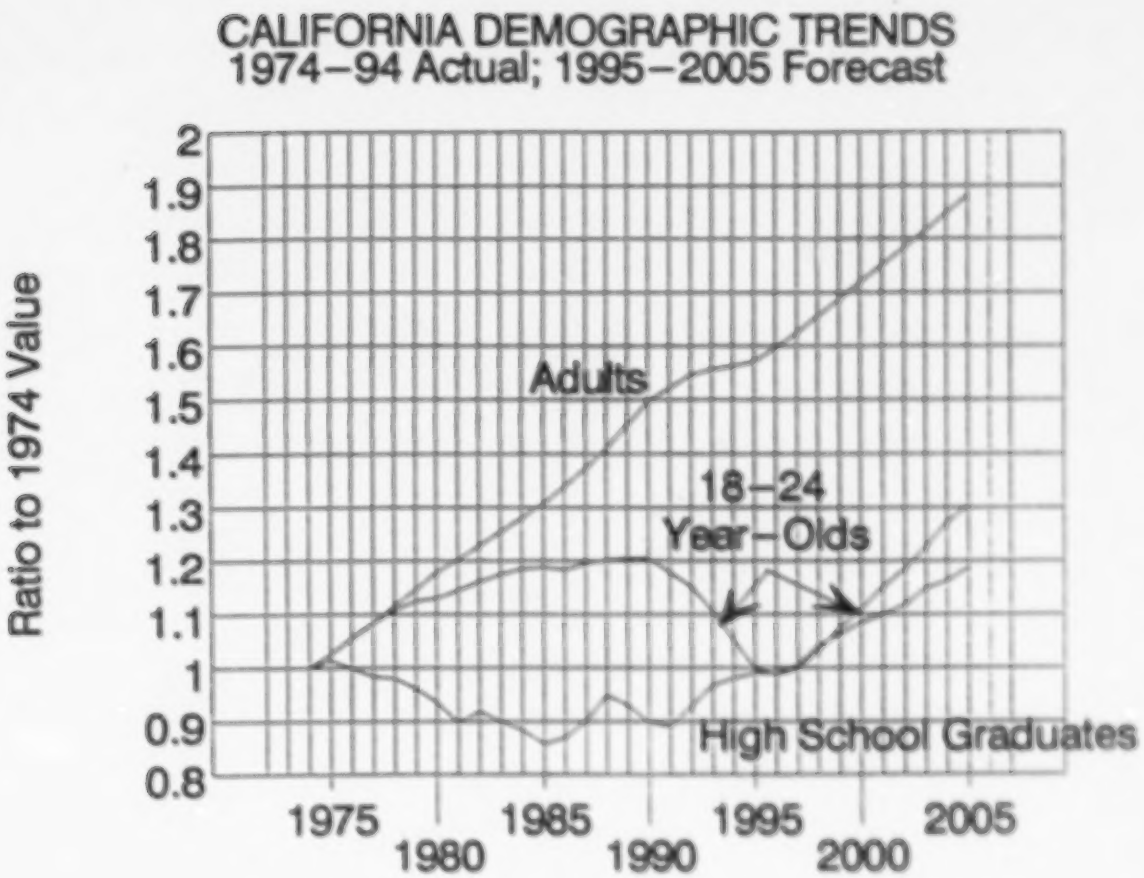
Notably, this model combines both demand and supply factors, a problem which can be solved through careful analysis; see, for example, McIntyre (1995) and Brinkman and McIntyre (1997). Because of its complexity, model assumptions about the economy, for instance, must be consistent and interrelationships specified accurately - in either ordinal (more or less) or cardinal (regression parameters and the like) fashion. Some of the relationships can be empirically estimated. For example, an economic recession will increase unemployment which increases demand for community college education, but which also may lower population which in turn decreases demand for education. Empirical evidence suggests that unemployment tends to dominate these offsetting impacts. At the same time, however, the recession dampens personal and corporate income formation, reduces public revenues, and, as a result, college budgets and sections and, therefore, reduces the student enrollment that can be accommodated by the college. By contrast, the amount of change in student learning that results from trends, events and policies is yet to be quantified. It (learning) can be usefully described in qualitative terms, however.

Our work draws also from other forecasts by the Rand Corporation (1995), UCLA (1995), California State Department of Finance (1996), and the Center for the Continuing Study of the California Economy (1995 and 1996). These forecasts all differ and our use reflects the ranges represented. Because of future uncertainty, it is useful to pose several probable scenarios in a model that simulates the differences in their consequences on colleges; see, for example, Brinkman, Groninga, and McIntyre (1994).

RESULTS

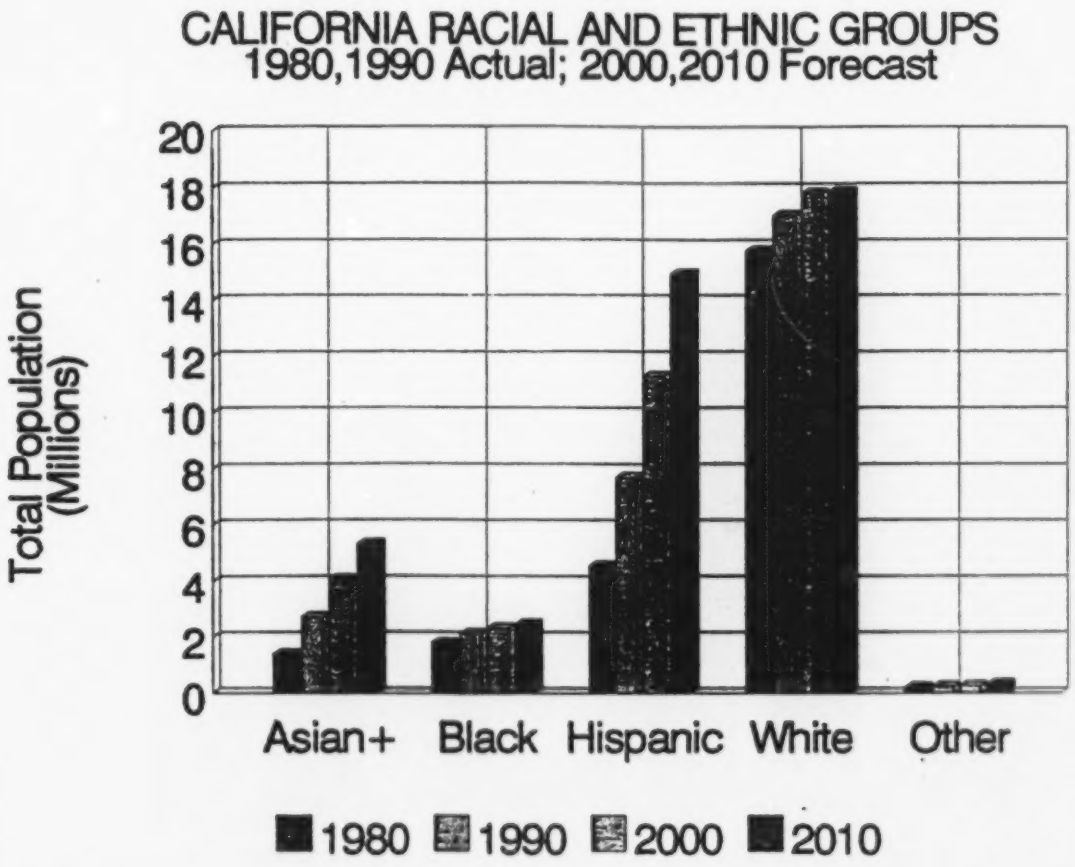
The following presents the results of our initial research on trends important to California Community Colleges; their implications for policy and practice; and a further analysis of how the national trend(s) may differ and what this means for college planners and researchers outside California.

Figure 2



Sources: Derived from Department of Finance, 1996; California Postsecondary Education Commission, 1995.

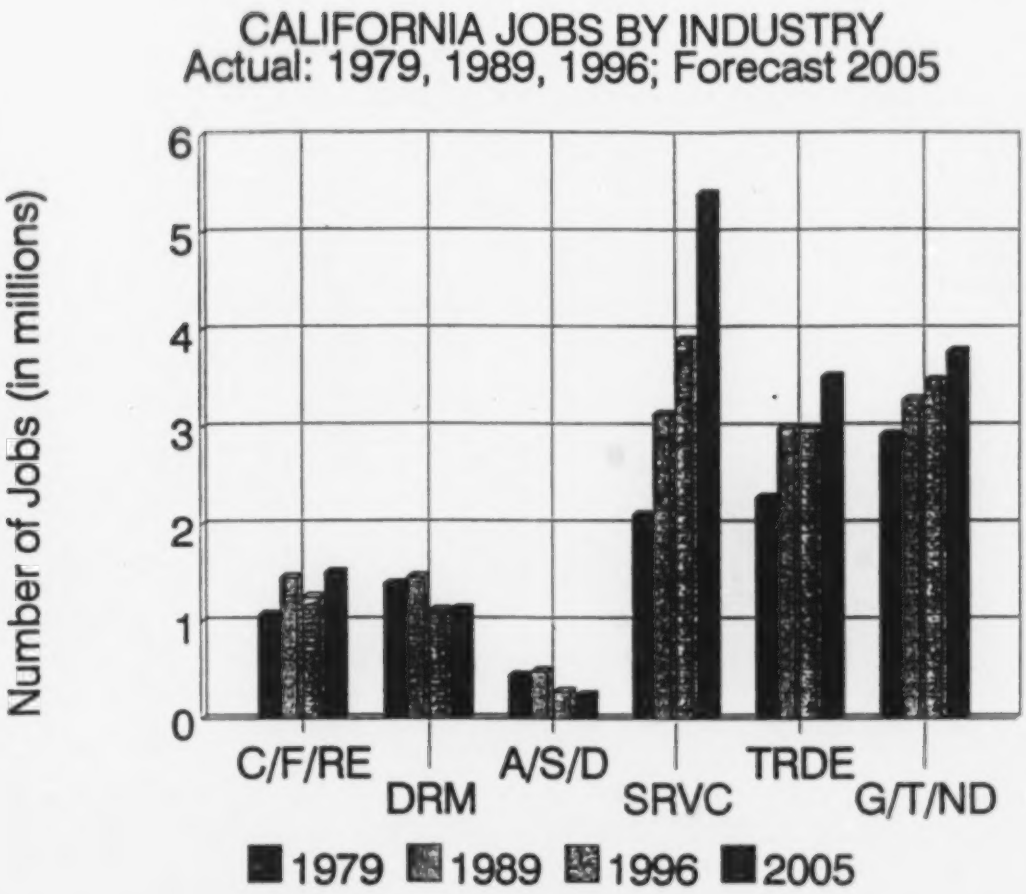
Figure 3



NOTE: Asian+ includes Asian and Pacific Islanders.

Source: Derived from Center for the Continuing Study of the California Economy, California Population Characteristics, 1995.

Figure 4



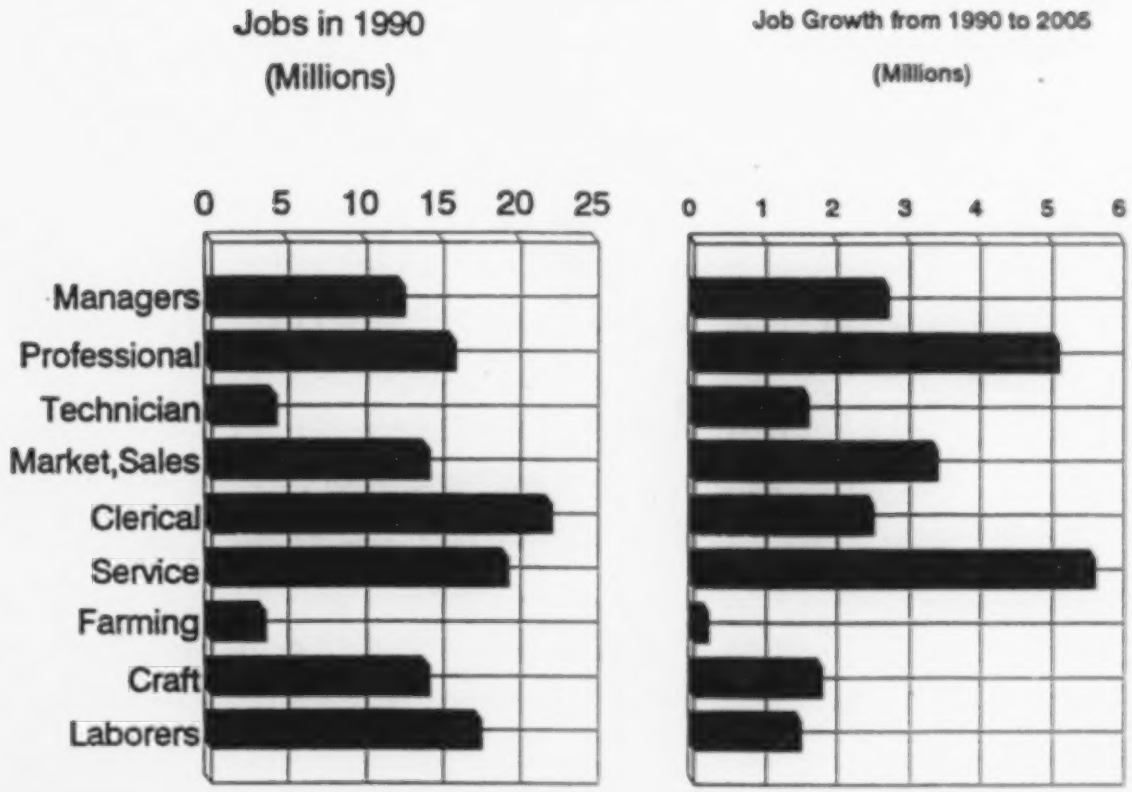
Sources: California Employment Development Department, 1996; Center for the Continuing Study of the California Economy, 1995.

Industry Legend:

C/F/RE: Construction, Finance and Real Estate
DRM: Durable Manufacturing
A/S/D: Aircraft, Space, Defense
SRVC: Service
TRDE: Trade
G/T/ND: Government, Transportation, Nondurable Manufacturing

Figure 5

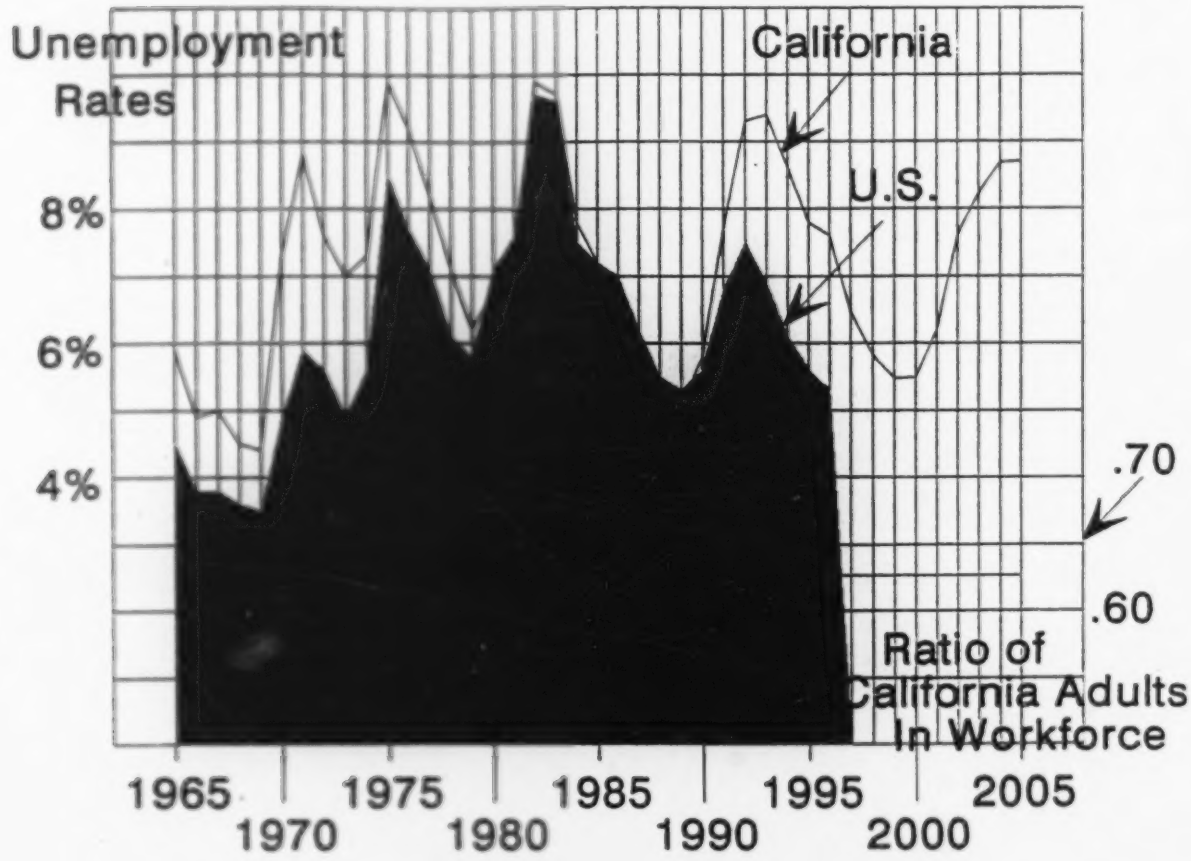
U.S. JOBS AND JOB GROWTH, 1990 TO 2005



Source: Center for the Continuing Study of the California Economy, California Population Characteristics, 1992.

Figure 6

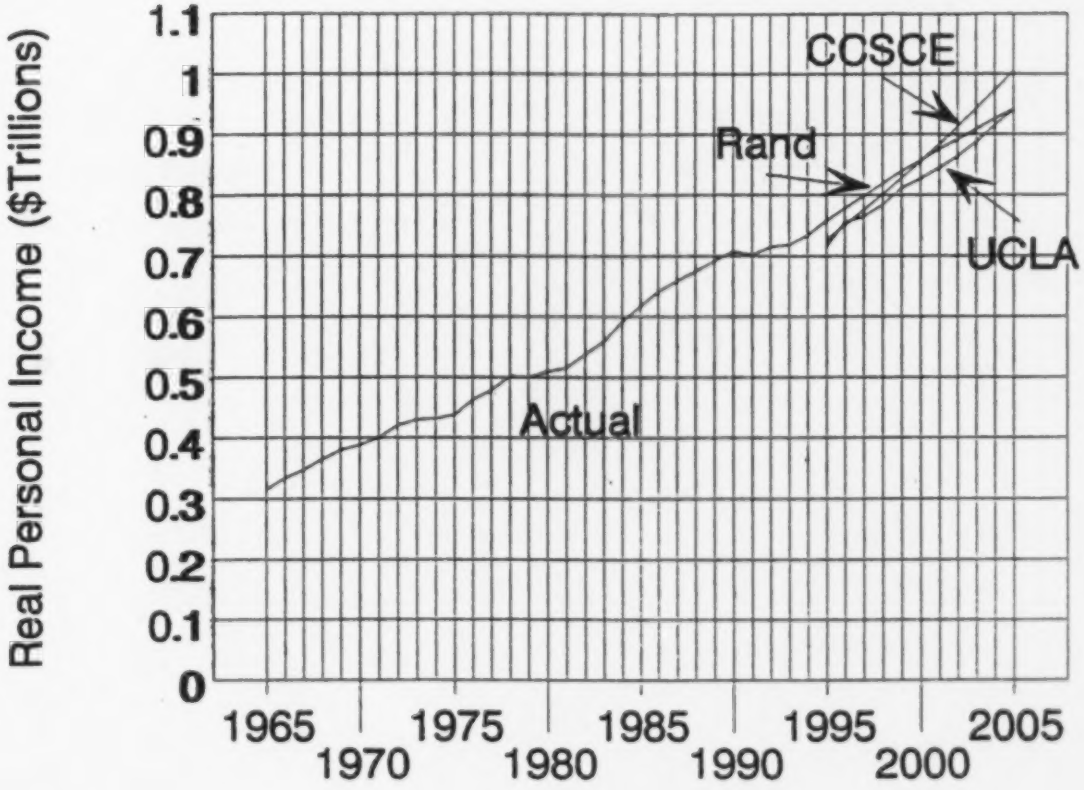
EMPLOYMENT AND WORKFORCE
Actual 1972–95; Estimated 1996–2005



Source: Chancellor's Office, California Community Colleges, August 1996.
Derived from California Employment Development Department, 1996, 1989; and California State Department of Finance, 1996.

Figure 7

CALIFORNIA PERSONAL INCOME
Actual 1965–94; Estimated 1995–2005



SOURCES: Derived from
California Governor's Budget Summary, 1995–96. UCLA Business Forecast, December 1994. Rand Corporation, The California Master Plan Revisited, DRAFT, January 1995. Center for the Continuing Study of the California Economy (CCSCE), California Economic Growth, 1994.

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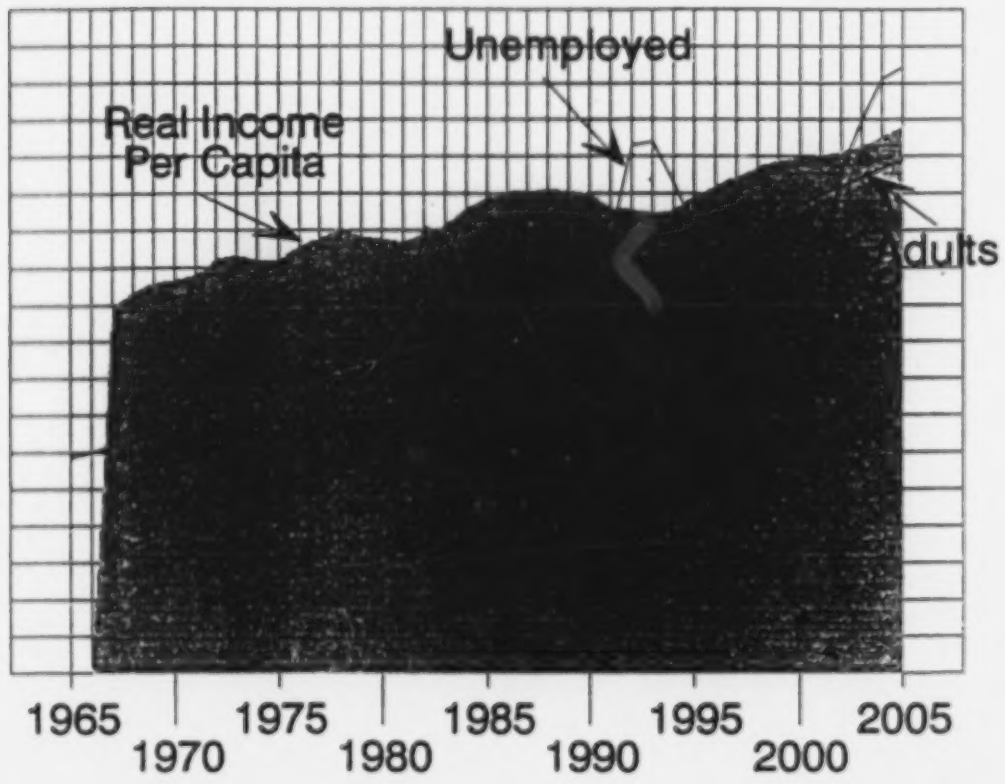
Figure 8

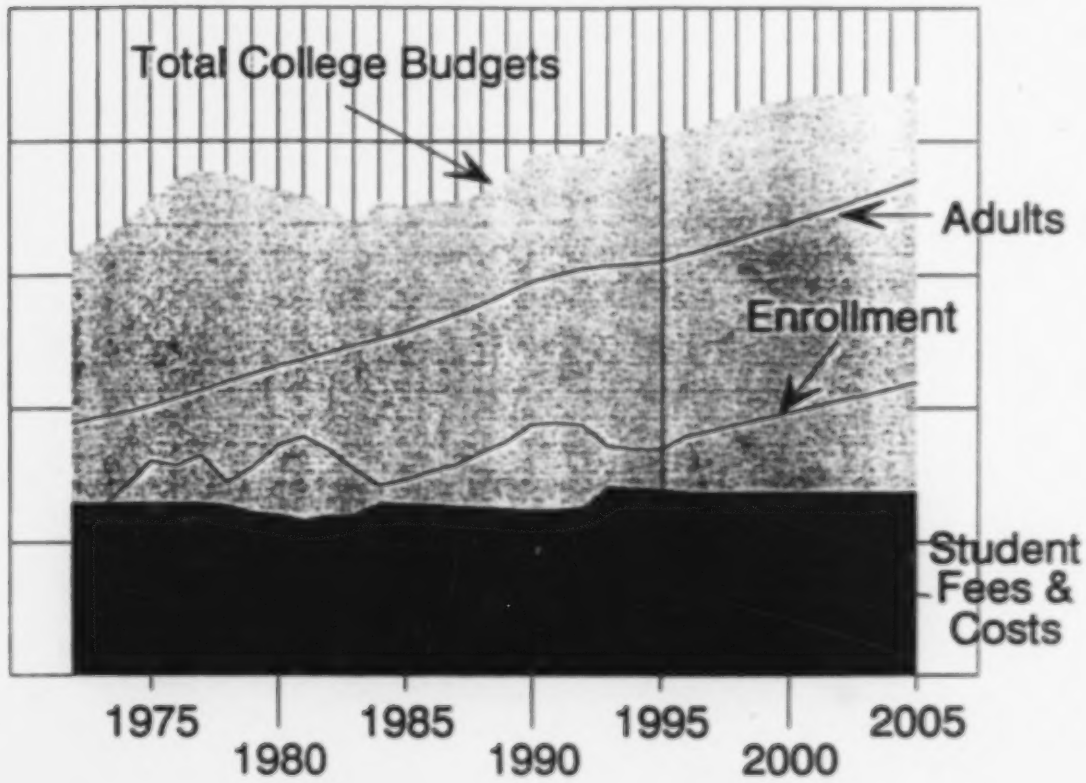
CALIFORNIA ECONOMIC TRENDS
Actual 1965–95; Estimated 1996–2005



Sources: California Employment Development Department, August 1996; Department of Finance, August 1996; California Governor's Budget Summary, 1996–97; Economic Report of the Governor, 1995.

Figure 9

CALIFORNIA COMMUNITY COLLEGE TRENDS
Actual 1972–95; Forecast 1996–2005



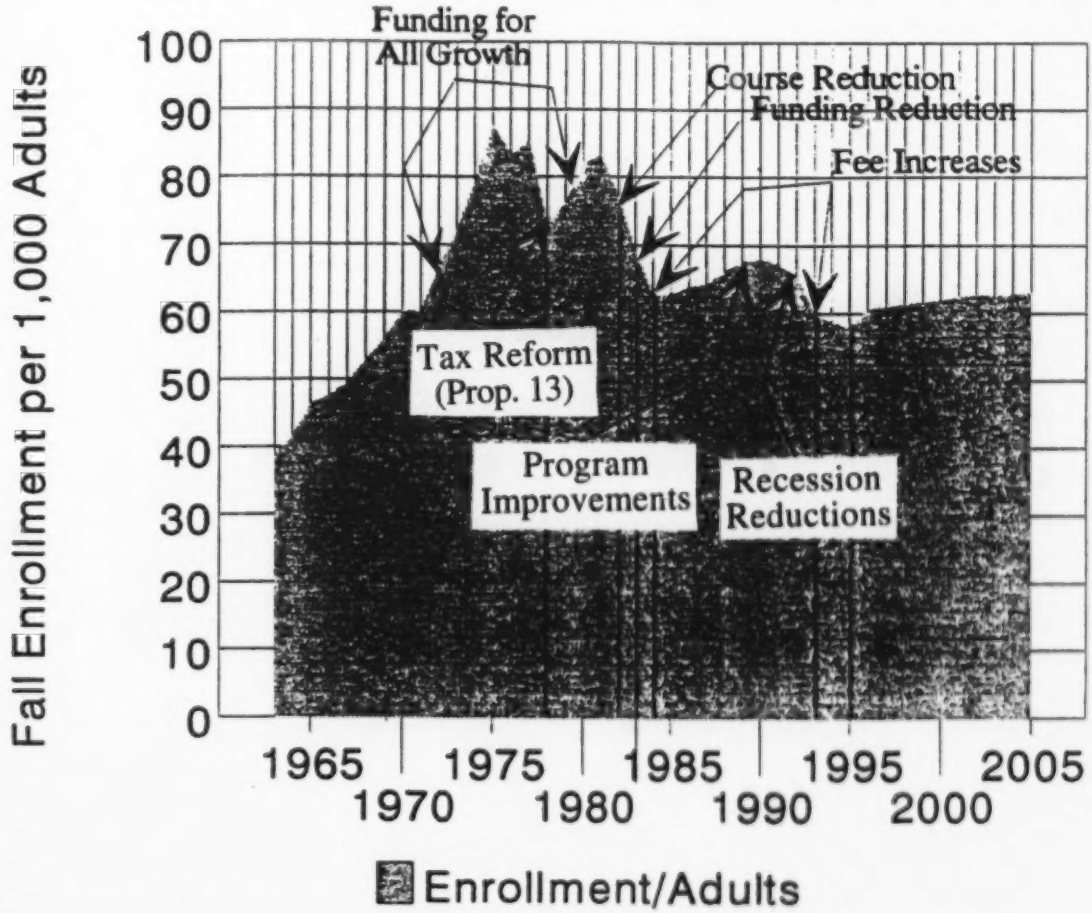
SOURCE: Chancellor's Office, California Community Colleges, September 1996.

NOTES: Student Costs include annual real (price–adjusted) student expenditures per FTES for fees, books and supplies, transportation, and child care.
Total College Budgets are total annual real current expense of education.
Enrollment: total community college fall headcount enrollment.
Adults: California population 18 years–of–age and over.
(Arithmetic adjustments are made to bring trends to similar scale.)

Figure 10

CALIFORNIA COMMUNITY COLLEGES

ACCESS AND POLICY
Actual 1963–95; Forecast 1996–2005



SOURCE: Chancellor's Office, California Community Colleges, September 1996.

NOTES: Major policies are depicted as influencing enrollment change. Lesser policies, economic conditions (unemployment), and demographic change also impacted enrollment, but typically to a lesser degree.

(should) impact the planning and funding of community college capital outlays.

Content. To summarize, the trends most important to community colleges appear to be:

- *Demographics*: emerging "baby-boomer echo" of 18-24 year-olds; increasing cultural and learning diversity of students; and the elderly education market.
- *Technology*: advances in interactive communications and fused systems; increasing use of computers and need for higher skills in most jobs; and increasing virtuality (decreasing reality?).
- *Economy*: longer and shallower cycles; increased outsourcing, career changes, and networking; and globalization.
- *Society*: advent of multicultural, mosaic society; increased cocooning and living alone; and changing structure of family.
- *Public Policy*: decreasing federal (increasing state) control; continued inadequate funding; and an emerging gap between existing practice and new paradigms of college organization and delivery.

Highlighting this work are (1) the extraordinary degree of *student diversity* the colleges will face, (2) the increasingly pervasive *influence of technology*, (3) continued *expansion in* the perceived *mission* of the colleges, and (4) the substantial *differences* between the current practice and that advocated by planners. Recommendations by these planners often tend to emulate changes taking place in private industry, and community colleges are positioned to embrace some of them. However, few of them have actually been tested in public higher education. Studies of using technology, for example, are ambiguous (Paulien and Associates and NCHEMS, 1996).

A pessimistic future view of community colleges would be that their share of the less-than-baccalaureate postsecondary market decreases substantially because of their inflexible policies, inadequate funding, and more versatile competitors. A more optimistic scenario would have community colleges becoming even more flexible, responsive and relevant to the changing educational needs of students and society, thereby

increasing their market share, and becoming even more of a factor in the economic and social development of the United States. The latter scenario, of course, is preferred, and - as noted above - will only be achieved by substantial changes in college policies and practices. Of course, that is the idea behind the subject of this paper. As Pohl (1996) argues, "The only good reason for trying to predict the future in the first place is so that now, in the present, we can try to shape it ..."

Our work in this project also suggests a number of general concepts for community college planning and change that, in some cases, tend toward new directions and, in other cases, are being hotly debated. It is this debate that also engenders useful planning and policymaking.

- ***on pedagogy:***

The most popular paradigm shift described in the literature is from a focus on *teaching* to a focus on student *learning*, and, as usually described, favors community colleges whose mission has always been largely student-centered, tailoring instruction and services to diverse student needs.

Research shows that longer-term *education* produces better results than does short-term *job training*; but, federal welfare reform policies will likely force more short-term job training. Colleges need to effectively blend the two approaches.

For effective learning, the process of turning *data* into *information* must be extended by the processes of turning information into *knowledge*; i.e., enabling students to become acquainted with and understanding information. Emerging Information technologies put both information and knowledge literally at the fingertips of students; consequently, students need to learn the *meaning* of that knowledge and how it applies in different contexts and to a variety of problems. Thus, the traditional organization of subject matter and college teaching - by *discipline* - may need to shift to an emphasis on methods of *solving problems* - increasingly by interdisciplinary approaches.

- ***on policy and management:***

Colleges may want to pursue more *collaborative* and less *competitive* efforts. This can apply to both students and institutions. Research reviewed for this project shows that students learn more collaboratively than they do competitively. And, our scan suggests also that competition among publicly-funded institutions typically costs more than does collaboration.

To ensure an equitable distribution of educational opportunity in the future, colleges may *distribute* or take instruction widely to individuals - in part through technology - a concept that seems to extend beyond just making the campus *accessible* in the traditional sense. Community college and other higher education officials should not defend "*traditions*" if they are no longer *relevant*. An illustration of this may be current ways of certifying student performance.

The emphasis on accountability must keep the end in sight. *Planning* and decisionmaking rely on evaluation of performance; but, many "*accountability*" projects produce long lists of performance indicators without considering how the information is to be used. And, to effectively assess the *value colleges add* to students (the colleges' real contribution), *outcome* measurement must control for variation in *inputs* (students' diverse entering skills and preparation).

While necessarily participatory, college "shared" decision processes may encounter difficulty because some of those involved in the consensus-building process are not ultimately *responsible* for it, they are just *consultants*. Most existing *regulations* of college practices have little to do with results and, therefore, do not induce colleges and their students to perform better; *incentives* for better performance are what is needed.

Colleges should *partner* with private industry to make workforce preparation more effective; but, since colleges produce substantial public or collective benefits, they should not be *privatized*.

The problems facing community colleges call for a *transformation* in the basic ways colleges organize and deliver instruction; an effort that appears to transcend *total quality management*, which, by contrast, has focused on making less important processes more efficient. Finally, the notion of *reinventing* the community college may have the merit of identifying desirable long-term goals, but efforts must begin by identifying major changes needed, then determining ways of feasibly *implementing* those changes.

Process. A major objective of this project was to help identify likely future scenarios, and provide college planners and decisionmakers with a sense of the long-term consequences of their decisions. This result, in turn, may cause planners to pause when considering actions that are beneficial to the college in the short term, but detrimental to the college in the long term. And, this kind of work should reduce the number of decisions that must be reversed in one or two years because of changing trends or conditions that could have been anticipated.

The success or failure of planning projects like that described here depends as much on the *players* involved and the *packaging* of the work as it does on its substance. Midway through the project (November 1995), the state-level Chancellor for the California Community Colleges announced his resignation, and, at the same time, there were a number of vacancies on the 16-member BOG. Thus, despite the efforts of all involved - state and local board members, staff, faculty, and students - there isn't as much "executive-level buy-in" of the work, the *New Basic Agenda*, as there would have been in the absence of such extensive personnel changes and as there must be for vigorous implementation. As to the work's packaging, funding was not secured to print and distribute the plan and accompaning trends document until August 1996, fully five months after the *Agenda's* adoption in March 1996. As a result, it was too early - in the fall of 1996 - to assess the impact of the *Agenda* on either state-level planning and policymaking or on planning by boards, faculty and staff of the local community colleges.

Subsequent impact of the *New Basic Agenda* will depend largely on the new Chancellor. Working with the

Board of Governors and with the Consultation Council, the new Chancellor may schedule and pursue policy issues from the *New Basic Agenda*, using it as a major tool for consideration of long-term policy. Alternatively, given the changing lineup of policymakers, it may prove adviseable to begin the process anew.

Application. This project, described here largely for its California application, may be undertaken for any college or system of colleges across the country. The research process would be virtually identical at each college, and consensus-building processes a variation of those described here. Of course, the specific trends and implications will differ. This paper may serve as a modest benchmark for contrasting trends and implications in California to those for a college or systems of colleges in other states. National and international trends, while similar for colleges in all states, may impact those colleges differently because of different local conditions.